

# EXHIBIT 24

# Signal Over Noise: How Emerging Markets Are Powering Lightning Growth 🎧🔌⚡



Ryan Gentry

Jan 26

♡ 19



Welcome to the latest edition of the Lightning Lab, a newsletter filled with Lightning Network updates, community coverage, and, of course, memes! In this issue, we discuss how Lightning continues to grow in emerging markets especially, and as always highlight a host of exciting community updates.

Last month we hosted the first public Taro Community Call, and were blown away by the amount of attendees and the excitement on the call for building on bitcoin! It was particularly interesting to see the dedicated focus of bitcoin builders contrasted against the noise in the broader crypto sphere. The bitcoin and Lightning communities are bringing sound money to the world by building sound protocols. The value this focus provides becomes apparent in the depths of bear markets, when those who have been cutting corners are exposed. If the last couple months of chaos in the broader crypto industry have been disappointing, give sound money and sound protocols a try: we're hiring.

## Signal Over Noise 🎧

Though the Western-centric crypto news cycle these past few months has been dominated by halted withdrawals, bankruptcy, and fraud, the global Lightning community continues to grow with a relentless focus on solving real problems for real people. In BTC terms, public network capacity increased 50% in 2022, and a staggering 373% since January 2021.

## Bitcoin Lightning Capacity

Source: lookintobitcoin.com



Importantly, this growth is especially occurring in emerging markets, from users that are not loud on Twitter, and may not even speak English. This month has seen several announcements on that front which we are excited to highlight here.

First, **Lightning Labs CEO Elizabeth Stark** joined the African bitcoin community in Ghana at the inaugural Africa Bitcoin Conference. She spoke about how by being early adopters of bitcoin and Lightning, African bitcoiners are ahead of the curve by leapfrogging legacy fiat payment rails. It was amazing to see the enthusiasm for bitcoin amongst this crowd, and to meet so many new communities, entrepreneurs, and bitcoin businesses from across the continent!

For instance, **Bitcoin Mountain** is a Bitcoin Beach-inspired community based in Cameroon. They built a community-focused Lightning wallet in **Bolt.Fun's** Legends of Lightning tournament. The African continent has experienced a huge amount of Lightning growth over the past 18 months, with Bitcoin Mountain joining other home-grown communities like South Africa's Bitcoin Ekasi and Bitcoin Witsand, the Congo's Kiveclair, and Nigeria's Bitcoin Village. Africa Free Routing even set up Lagos, Nigeria's

first public routing node! These communities are joined by well-known Lightning businesses like **Paxful** and **Bitnob**, with new ones like **Machankura** and **CryptoConvert** popping up left and right!



Elle Mouton  
@ElleMouton

Today I payed for my groceries at @PicknPay in #Bitcoin using #lightning ⚡⚡  
Great job @CryptoConverted & @carelvwyk!!! I can't believe this day has finally arrived. Feels like SA is ahead of the game on this one za ⚡❤️



6:20 PM · Nov 2, 2022

2,501 Likes 506 Retweets

**Lightning Labs Infrastructure Engineer Elle Mouton** even went viral in early November by tweeting this video of paying for groceries with Lightning at Pick n Pay, one of the largest retailers in South Africa, which is piloting a Lightning integration with **CryptoConvert**.



**Bitcoin Beach VietnamVN**  
@BitcoinBeachVN

Inspired by Bitcoin Beach El Salvador, we bring you the VietnamVN version. Powered by the [@neutronpay](#) [#Bitcoin](#) Lightning ⚡ app with VND on/off ramps.

We're excited to announce the world's first Lightning conference in South East Asia 🌍 will be hosted in Danang, Vietnam!!!

12:51 PM · Oct 17, 2022

897 Likes 157 Retweets

Next, Bitcoin Beach Vietnam is another new Lightning-focused community powered by **Neutronpay**, the Vietnam-based Lightning solution for merchants. They're organizing the first-ever Southeast Asian Lightning conference in Danang, Vietnam, on March 23-24, 2023. The Lightning community in this region is much bigger than most understand: one Thailand-based Facebook group of Lightning enthusiasts already tallies over 11k members, the Chiang Mai Lightning meetup (birthplace of **Umbrel**) celebrated its fourth anniversary in August, the **Build on Bitcoin Space** in Bangkok is hosting workshops on running Lightning nodes and on Taro, and, finally, Bitcoin Island in the Philippines (powered by **Pouch**, who is hosting the Bitcoin Island Retreat March 27-29) has onboarded hundreds of merchants to the Lightning Network in just a few short months of operations! We're incredibly excited to meet these communities in person and hear about how they're bringing bitcoin to billions. 🚀

Finally, the Latin American Lightning community really flexed its strength as 2022 came to a close by hosting three major events: Satsconf in São Paulo, Brazil (organized by Lightning Labs' own **Lucas Ferreira!**), Labitconf in Buenos Aires, Argentina, and Adopting Bitcoin in El Salvador. Of course, the Bitcoin Beach community in El Zonte, El Salvador is the original emerging market Lightning community that inspired the world, but it has been joined by Guatemala's Bitcoin Lake, Costa Rica's Bitcoin Jungle, and Brazil's Bitcoin Beach BR. Online communities like Latinodos and Noderunners Brasil have been spun up to help Lightning node operators, and educational programs like Torogoz, Vinteam, and Libreria de Satoshi have started onboarding new developers to Bitcoin and Lightning. Last but certainly not least, Latin American Lightning businesses like El Salvador's **Bitcoin Beach Wallet**, **DitoPay**, **Tainkii**, **K1 Kioskos Automáticos**, and **Rapaygo**, Guatemala's **Ibex Mercado** and **Osmo Wallet**, Mexico's **Tauros**, Colombia's **Tatacoa**, Argentina's **Muun Wallet**, **Krypton Market**, **Lemon**, **Belo**, **fiwind**, and **Southxchange**, Brazil's **Bipa**, and **Kubbent**, Chile's **Buda**, and others continue to push adoption forward. What an amazing community! 🔥

## News & Updates

### Lightning Launches



River  
@River

🔔 The time has come! 🔔 ⚡ Announcing RLS: River Lightning Services ⚡ 🇸🇻 A Lightning Network gateway designed to power the next generation of payments sv RLS is proud to power LN transactions for El Salvador's Chivo wallet Let's go 👉  
rls.dev



3:10 PM · Oct 11, 2022

317 Likes 62 Retweets

River launched River Lightning Services (RLS), a Lightning network gateway designed to power the next generation of payments, and the Chivo wallet in El Salvador is built on their platform. We love new options for developers looking to build on Lightning!

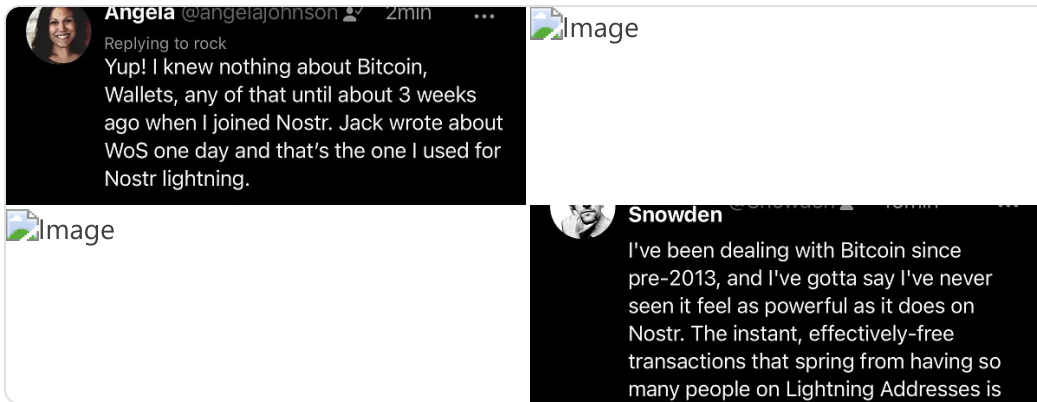
ZEBEDEE announced NBD, their open source arm focused on building Bitcoin/LN open source projects, led by fiatjaf. NBD is maintaining a wide collection of projects used in the ecosystem, kudos for supporting the community!



William Casarin CA ⚡  
@jb55



I see this every day. nostr will 🍊 pill the masses.



7:17 PM · Jan 24, 2023

667 Likes 107 Retweets

Nostr, a protocol created by NBD's prolific Lightning developer fiatjaf, aims to create censorship-resistant social networks. The Lightning community has adopted it en masse, with Edward Snowden posting about it and Jack Dorsey providing a 14 BTC grant! For Max Webster, Lightning-focused investor, the fit between Nostr and Lightning is simply too natural to ignore. Alby, Damus, Astral.Ninja, and many other clients, relays, and other services are all experimenting with the ways Lightning and Nostr can interact. The number of accounts writing notes on Nostr grew to more than 400k in January. 📈

Impervious released the alpha version of their Impervious Browser. After decades, the problem of transferring large files peer-to-peer over the internet is finally being solved!

Breez, the Lightning infrastructure provider, raised \$4.5M in an oversubscribed funding round to accelerate Lightning as a Service (LaaS) as a model to bring more non-custodial Lightning applications to the global mainstream.

Synota, a Bitcoin technology company providing transactional flexibility and instant settlement via the Lightning Network to the energy industry, announced it has raised a \$3M seed round led by Ego Death Capital.

Kollider, the LN-native derivatives exchange, announced their official public launch and a \$2.4M seed round. In addition to their exchange, Kollider also offers a Lightning

wallet with synthetic stablecoins, allowing users to hold balances in USD and EUR.

**Lightning Landscape** is a new tool that organizes over 1,400 companies, open source projects, and communities in the Lightning ecosystem in one searchable platform. Builders, investors, and researchers can now explore the entire Lightning space with a few clicks, very cool!

**Wavlake**, a platform that helps musicians and artists get paid through the Lightning Network, raised a pre-seed round from Trammell Venture Partner and Hivemind Ventures to help grow their platform.

## Lightning Stats

- 🎮 **Viker**, a play-to-earn mobile games studio powered by ZEBEDEE's Lightning infrastructure, has already seen over 80 million transactions across 100 countries. Wow! Recently they announced two new games with LN rewards: Bitcoin Chess and Bitcoin Scratch.
- 🦊 **Kevin Rooke** shared some routing volume stats from a few big routing nodes in September. River routed ~640 BTC (1.4x their public capacity), ZFR routed ~376 BTC (4x their p.c.), LN Markets routed ~45 BTC (1.6x their p.c.), etc.
- 🏠 **River Financial** routed their one millionth Lightning transaction in October, with 75% of those transactions routed just in the last year. By the end of the year, River had cumulatively routed 3,700 BTC through their nodes since inception.
- 🎧 **The Podcasting 2.0 movement** has officially enabled more than 10,000 podcasts to accept streaming payments over the Lightning Network, with no signs of stopping!
- 🦊 **Wallet of Satoshi** users have made over 6M LN payments since the app first launched. It took only 68 days for their last million vs 801 days for their first. Their users are currently doing almost 20,000 payments a day.
- 🇨🇱 **Buda.com**, the South American bitcoin exchange, saw a 268% increase in Lightning Network usage during the month of October.
- 📈 **OpenNode** shared that they reached an ATH in LN payment volume in October across all their users.

- **NL Bitcoin Amsterdam** processed almost 4,000 on-site Lightning transactions with an average value of ~\$8. BitKassa processed 927 Lightning transactions (vs. 11 on-chain) at side events.
- 🤖 **Robosats**, the p2p Lightning-to-fiat exchange, did 21.21 BTC (\$360k) of volume in November. That marks eight straight months of all-time highs, with November almost doubling September's volume.
- 🍕 **Slice**, the browser extension that rewards users for viewing ads, shared that in the last 30 days, over 2,000 users withdrew their balance using the Lightning Network through ZEBEDEE.
- 🏠 **CoinGate** processed 25,000+ Lightning payments in 2022, up 97% from 2021. 6.3% of all their Bitcoin payments in 2022 were made on the Lightning Network, vs. 4.5% in 2021.
- 🛍️ **Purse** shared that 20% of their customer's bitcoin transactions have moved from on-chain to the Lightning Network within the first two months of launching support.
- 💧 **Geyser** shared their 2022 in review: 320M sats distributed across 133 projects that went live from 40 different countries.

## Lightning Ecosystem

- 🍌 **Coinshares** published a report on Taro, detailing the history of asset creation on Bitcoin, how Taro works, its place in the Bitcoin tech stack, and its potentials and risks.
- ⚡ **Bolt.fun's** Legends of Lightning hackathon included 250+ makers across 73 projects who built new wallets, onboarding services, educational platforms, and cool WebLN experiments. They crowned a winner for each of their two tracks: Lightsats, a beautiful Lightning-first onboarding tool for pre-coiners, for "Global Adoption," and AgriMint, a self-sovereign micro-banking solution for community savings groups built on bitcoin, Lightning, and Fedimint, for "Building for Africa."
- 🧑🏫 **PlebLab** released the PlebDev course, an online course teaching HTML/CSS, Javascript, React and everything you need to know to start as a front-end developer focusing on Bitcoin/Lightning projects. Students are frequently getting together in

the PlebDevs community discord and hacking together on their first few Lightning apps. Pleblab is hosting the 2023 edition of SATx, a hackathon for Lightning Builders, on March 17th-19th in Austin.

- 🍷 **Nostrica** is a conference organized by the Nostr community that will be held from March 19th-21st in the Bitcoin Jungle community in Uvita, Costa Rica. The conference will also accept online attendees.
- 🏡 **Bitcoin Park**, a community supported campus in Nashville focused on grassroots Bitcoin adoption, will host a Lightning Summit on July 13th-14th.
- 🌐 **“Send Globally”** is a new feature announced by Strike and Bitnob during the Africa Bitcoin Conference that allows users to easily send money between the US and any user with a phone number-based mobile money account in a number of African countries. A few days later, **Coincorner** announced the same feature for the UK in partnership with **Bitnob**, and later on a connection with Pouch, for remittances to the Philippines. Stay tuned for support for other countries and currencies.
- 👁️ **Bolt.Observer** released their new LiquidOps tool, which includes a node operations dashboard, and an alerting agent. They also added new parameters to their explorer that measure how well-positioned a node is in the Lightning Network. And finally, they shipped Lightning Vault, a secrets manager for macaroons and other Lightning node authentication tokens on AWS cloud.
- 🌱 **Neutronpay** published a video of the first ever mainnet Lightning transaction using their new mobile app, in which a user bought tacos in Ho Chi Minh City! And btw, their new app is out there, check it out!
- 📞 **Machankura** presented their architecture at Adopting Bitcoin, and blew attendees’ minds with the statistic that 90% of payments on the African continent use USSD, the text-based mobile phone communication service that Machankura has connected with Lightning technology. Wow!
- 🦅 **Eagle** installed the first Bitcoin ATMs in Australia that are connected to the Lightning Network. More of that mates!
- 📖 **Emeralize** is a new e-learning platform and marketplace for content. It combines Substack and Udemy with the Lightning Network to allow educators from anywhere in the world to earn and learners are rewarded by their effort

throughout the courses. ZEBEDEE created a free introductory Lightning Network course.

- 🚗 **Satimoto** has onboarded 20k+ electric vehicle charging stations in Europe to their app that allows users to stream sats over Lightning to pay for a new charge. Pay for your charge at Lightning speed!
- 📦 **Blockspaces** announced an integration between their non-custodial Lightning Network merchant software offering and QuickBooks, the popular business accounting system. Sats-based accounting is here to stay!
- 💰 **Galoy** announced Lightning Cash Register, a point of sale web app that makes it simpler for anyone to receive sats to their Bitcoin Beach Wallet account. Additionally, the Bitcoin Beach Wallet is currently being translated into over 15 languages by an incredible open source community.
- 2 **Geyser Grants Round #2** is accepting applications until the end of January. This time, the themes are Visual Arts, Translations, and Community & Meetups. Projects on Geyser can now receive contributions directly to their Lightning addresses.
- 🗺️ **Wallet of Satoshi** has integrated with **BTC Maps**, the crowdsourced map displaying all the places worldwide that accept bitcoin and Lightning payments, allowing users to more easily discover places to spend their sats and promote the circular economy!
- 🏪 **Coincorner** produced yet another excellent video of a Lightning payment chain, with team members in the UK paying each other in seconds all with different Lightning apps before buying coffee for a friend over video all the way in El Salvador. Amazing!
- 🤖 **René Aaron** built a payment module that allows existing vending machines to be equipped with the ability to generate invoices and receive Lightning payments.
- 🗂️ **Tao** is a new open source Bitcoin and USD wallet built by Danny Diekroeger that currently uses LN Markets as the backend for USD swaps. Steven Ellis, the operator of the Cold Sats node, has built a frontend implementation of the tao-wallet npm package.

- 🐦 Keet, the peer-to-peer video chat app from Bitfinex, integrated Lightning payments. We love to see the focus on permissionless payments and communication!
- ⚖️ Judica, bitcoin developer Jeremy Rubin's company, has started implementing the Taro protocol as a Rust library.
- 🎧 Wavlake released their 2.0 platform. Wavlake now has a Player for listeners to interact with artists through Boosts and Messages over Lightning, and a Studio for artists to upload their music.
- 🐺 Wolf, NYDIG's LN/Taro startup accelerator, launched their website and has accepted companies for their first cohort. We are excited to see what Wolf participants are building!
- 📊 LN Markets added an automatic withdrawals feature to their Lightning-native exchange. Users can now direct LN Markets to auto withdraw to a Lightning Address after taking profit, executing a stop loss, or exercising options.
- 🧑 The Bitcoin Design Community announced the winners of their Designathon. They included: a project exploring how Taro universes could be visualized, micro-banking for agriculture communities in Africa using Lightning and hardware wallets, and an interface redesign for LNDg, the popular Lightning node automation software.
- 🍷 Mash released an NPM package to enable any website developer to interact with Mash's consumer wallet, through payments, donations, boosts, etc. They also announced their Wix app is now available in the Wix App Marketplace. And as if this was not enough, Mash launched a number of demo apps on Replit, a platform for developers to collaboratively build and share software.
- 🔧 Amboss announced a network and node stats dashboard, with information about node status, channel balance, and more. They also launched Magma Earn and Magma Connect, where Earn allows users to offer Lightning channels for sale, and Connect allows users to buy new channels.
- 🧐 LN Capital released a new version of TORQ, a capital management tool for routing nodes. The v.0.16.3 lets users organize their routing nodes with tags, inspect channels with a new pop-out modal, and more.



- 📺 **Vida** now has multi-participant call/streaming features. Users can host live podcasts, stream with multiple participants and automatically split earnings, pull viewers on stage for Q&A, toggle payments, and more. They also added Lightning Addresses!
- 🐝 **Alby** has added a new WebLN/WebBTC interface to their browser extension. With the new Javascript API for Lightning web applications, developers can perform calls to the user's connected node backend through a simple interface, making web application development much easier. Check the cool applications they showcased to demo what can be built using the API.
- 📖 **BTC Map** added the ability for users to tip those tagging new merchants accepting Lightning payments, a new Android release with an enhanced Community experience, and a new Communities directory. These devs ship!
- ☁️ **Zeus** released a new version of their mobile app which allows users to connect their LND nodes using Lightning Node Connect (LNC). They also introduced Echo, a new Podcasting 2.0 web player that connects to your node via LNC.
- 🔥 **NitroWord** is a new game built with the Lightning Network. Players win sats when they crack seed phrases derived from the preimage of a payment they made to play the game, which makes it provably fair.
- ⚡️ **Satlantis** is a multiplayer minecraft world with a full bitcoin economy. Users can use in-game ASICs to earn sats, withdraw and deposit using the Lightning Network, and even create a clan to combine their hashrate with friends.
- 🤖 **Apollo** is a new platform that allows bitcoiners to review products and earn sats while doing so. Like ProductHunt, but with Lightning integration.
- 🎙️ **Podfans** is a new Podcasting 2.0 app recently released. Soon no podcasting app will be viable without Lightning support!
- ⚡️ **Lightning Network Plus (LN+)** published their Lightning liquidity swaps app to the Umbrel app store.
- 🏎️ **RideTheLightning** released v0.13.2 with ability to generate taproot addresses and AMP invoices, configuration to open unannounced channels by default, among other improvements.

- 🗝️ **Bottlepay** also added support for Lightning Address. It's becoming an ubiquitous feature within Lightning applications.
- 🇸🇻 **Tiankii**, a Salvadoran POS app, launched contactless payments support via NFC. Great UX!
- 🔄 **Gray Finance** published their Lightning Swap app to the Umbrel app store.
- 🎓 **BR Paradigma Education** launched an online course in partnership with Diego Kolling teaching plebs how to make money from running a Lightning node.
- 💡 **Lucent Labs**, a new Bitcoin and Lightning infrastructure provider, announced two products: Bolt Node, that allows users to set up and scale bitcoin native infrastructure dynamically, and Bitcoin Cache, for treasury/custody infrastructure.
- 🛡️ **Lightning Privacy Research** is a website compiling future potential improvements to privacy on Lightning. The website is the result of research done by our very own **Evan Kaloudis**, together with **Max Hillebrand**, **Paul Miller**, **Ben Carman**, and **Tony Giorgio**.
- 🤖 **Coinos**, creators of a Lightning web wallet, celebrated their 10th anniversary with a redesign. They recently shifted their focus to merchant adoption and have been improving their UX for that use case.
- 🛒 **LNBits** started a shop, where people can buy the parts to assemble their LNBits hardware wallet, LNPoS, BitcoinSwitch Candy Dispenser, and more.
- 📝 **Velas Commerce** published a great guide with a checklist Lightning node operators can follow when troubleshooting their nodes.

## How Emerging Markets Are Powering Lightning Growth 🔌

Lightning adoption continues to grow the fastest in emerging markets, and specifically the regions of Southeast Asia, sub-Saharan Africa, and Latin America. Answering the question “why” is actually a fairly straightforward two part endeavor.







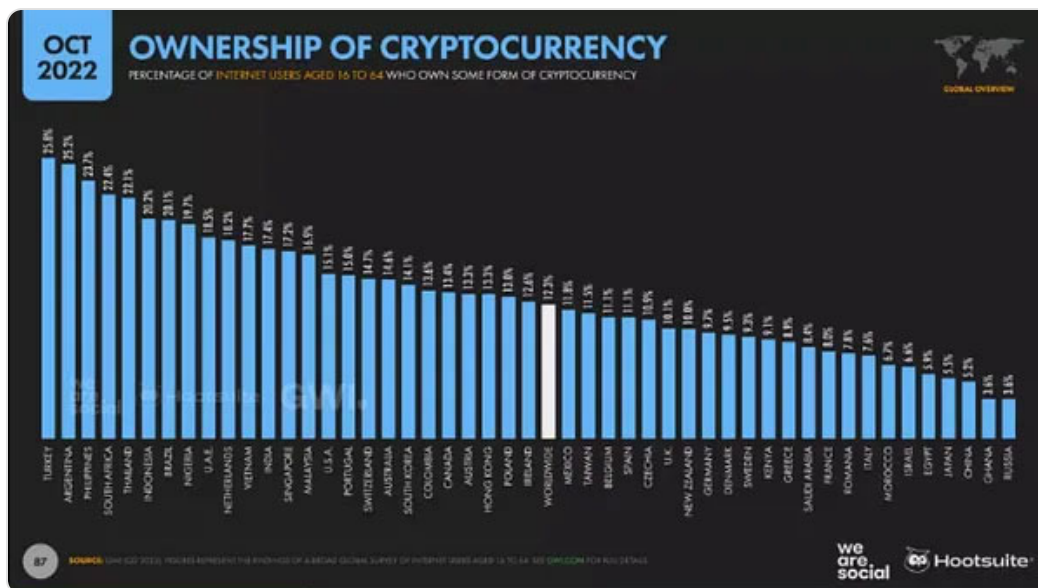
Alex Gladstein ⚡  
@gladstein

Incredible chart

The countries with the highest adoption of Bitcoin and cryptocurrency are some of the same that have been screwed most badly for 60+ years by IMF and World Bank policy:

Argentina, Philippines, Brazil, Nigeria, Thailand, India, Turkey

The people strike back 🙏



8:26 PM · Nov 9, 2022

392 Likes 95 Retweets

First, Chief Strategy Officer of the Human Rights Foundation Alex Gladstein tweeted the above chart which shows the percentage of Internet users aged 16 to 64 who own some form of cryptocurrency, according to [GWI.com](https://www.gwi.com). Countries we explicitly highlighted above like Argentina, the Philippines, South Africa, Thailand, Brazil, and Nigeria all have ownership percentages of 20% or greater. That's a full 5% higher than the US, 8% greater than the worldwide average, and 10-12% greater than Western European countries like Germany and France. This means there are potentially millions more bitcoin owners in emerging markets than in the developed countries that most "crypto" news is focused on.

Why is this the case? As Gladstein opined above, the people in these markets do not need to be convinced of the ills of fiat currency, they have generations of lived experience with currency failures, hyperinflation, bank bail-ins, and all of the catastrophic downsides of fiat that the developed world has been lucky to avoid for the last several decades. Bitcoin Core Developer Gloria Zhao described this well after visiting Buenos Aires for Labitconf in November.



grokia  
@glozow

Seeing [#bitcoin](#) in Argentina humbled and inspired me. Stories about gov rug pulls and black market cash trades seemed quite abstract to me as an American, so I've always wanted to visit. All expectations were met within 1h of landing in Buenos Aires.  
0/n

12:45 AM · Nov 16, 2022

400 Likes   47 Retweets

So the first part of the answer to “why is Lightning growing fastest in emerging markets” is that people in those regions are adopting bitcoin at the fastest rates because they intuitively understand the value proposition of a money separated from state control. The second part of the answer comes from CEO Elizabeth Stark: “necessity is the mother of adoption.”



elizabeth stark 🍌  
@starkness

[@jamesviggy](#) Signal >> Noise  
Utility >> Speculation

The vast majority of users are not loud on Twitter and are using [#bitcoin](#) because it provides real utility to them. Many may not even speak English.

As I like to say, necessity is the mother of adoption. 🌐⚡

5:55 PM · Jul 4, 2022

6 Likes 1 Retweet

Nearly all of our conversations with Lightning users in emerging markets center around the fact that using fiat payment rails in these areas is a nightmarish experience. High fees (especially when transferring internationally), consistent outages, censored payments, and more are the norm in these regions instead of the exception like they are in the developed world. Lightning today provides fees on the order of 1-20 bps (10-100x lower than fiat rails), with constant uptime, uncensorable payments, and provides the exact same experience whether users are buying groceries locally, or tipping a creator internationally. For a wide swath of emerging markets payments use cases, Lightning is already better than legacy payment rails, and international users are adopting it out of necessity.

One unique way that Lightning allows businesses to tap into this demand is by enabling the permissionless earning of bitcoin. **Stakwork** is a globally accessible, Lightning-powered Mechanical Turk, breaking down business processes like preparing images for machine learning algorithms into microtasks, and paying an always-on network of crowdsourced workers via Lightning for completing each of those microtasks. These workers are joining **Stakwork** out of necessity, in order to earn money in their spare time, and end up adopting the Lightning Network for payments without even initially realizing it.



ZEBEDEE  
@zebedeeio

Brazilians comprise less than 10% of our user base, but generate 30% of all ZEBEDEE activity. So it's no coincidence we focused on launching this kind of integration in Brazil first. That said, expect to see similar solutions rolling out on ZEBEDEE for other countries soon!

3:04 PM · Mar 17, 2022

33 Likes 2 Retweets

Companies like **ZEBEDEE** and **Thndr Games** in the Lightning gaming community experience a similar phenomenon, as an outsized portion of users are based in emerging

markets, play the games to earn money (and because they're fun, of course!), and then adopt the Lightning Network to actually use their earnings to pay bills, buy groceries, etc.

So in conclusion, why do we see such strong Lightning adoption in emerging markets? Because 1) the users want a currency alternative to their local fiat, as they have significant experience with all the downsides of fiat currency that the developed world has largely been spared of and 2) because necessity is the mother of adoption, and these users need the unique earning and spending experience that Lightning has to offer.

Imagine what adoption will look like when Taro brings stablecoins into the mix. 

## Lightning Labs News

### Product



After the initial launch of the alpha daemon for the Taro protocol, the community dove right in to play with the code and give invaluable feedback. Based on that feedback and some known issues, we released a new version of Taro (v0.1.1). This minor release includes a series of bug fixes and the ability to send "full value assets", enabling the sending of entire amounts of an asset without a change address/split. Keep an eye out for the next major 0.2 milestone, and a mainnet release soon. 🧐

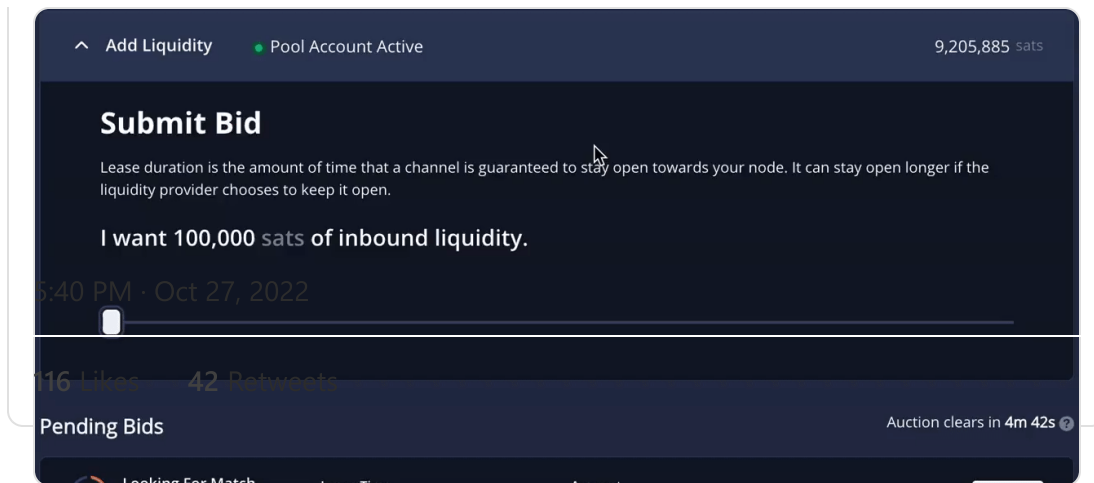


Michael Levin ⚡👉

@MichaelLevin

1/9: Getting Lightning inbound liquidity is now super simple, thanks to the new order wizard in the latest Lightning Terminal Release. Add inbound [#bitcoin](#) liquidity to your node in a few easy clicks.

 explaining how it works 



In the world of Lightning Terminal, the latest release included updates to the Pool experience to simplify the ability to submit bids into the market and redeem sidecar channels. With the new Pool order wizard, node operators who want to increase their inbound can more easily submit bids.

On the LND front, version 0.15.5 is the latest release with important bug fixes, and 0.16 will be coming soon with Taproot channels among other features. We very strongly urge everyone to upgrade to 0.15.5 (recommended) or 0.15.4 as they contain critical security fixes. Prior versions are not safe as they were affected by two bugs that would cause node operators to desync from the bitcoin blockchain.

Finally, the new Pool release moves the product into beta with useful features to help builders and Lightning companies create a smoother Lightning UX in order to better meet user needs, namely zero confirmation channels and sends, plus unannounced channels.

## Media

CEO Elizabeth Stark spoke about how bitcoin builders never stop building in bear markets on a fireside chat at Labitconf in Argentina with Florencia Ravena of Muun. At the Africa Bitcoin Conference in Ghana, she sat down for a fireside chat with Femi Longe of Qala and highlighted that Africa is ahead of the curve when it comes to Lightning adoption with numerous promising projects and communities popping up.

Head of Finance and Ops Michelle Qian discussed global adoption of bitcoin on a panel at Labitconf with Machankura CEO Kgothatso Ngako, amongst others.

**Protocol Engineer Jonathan Harvey-Buschel** explained the Taro protocol at Labitconf, and did the entire presentation in Spanish!

**Lightning Evangelist Lucas Ferreira** discussed Bitcoin Developer Education and presented Lightning Labs' suite of solutions at Adopting Bitcoin.

**Technical Content Lead Leo Weese** presented an introduction to Taro for the Bolt.Fun Hackathon participants, and also talked about Taro at Adopting Bitcoin in El Salvador.

**Developer Advocate Hannah Rosenberg** did a technical deep dive focused on issuing assets on Taro for Bolt.fun's Legends of Lightning tournament.

**Engineer Evan Kaloudis** discussed his app Zeus and Lightning Node Connect in a Twitter Spaces with Voltage.

## Hiring

Are you a security engineer with experience in securing web, Bitcoin, and other public-facing network services, penetration testing, and both automated and manual source code security reviews? We are hiring for a Security Engineer!

Or are you an experienced software engineer who embraces the DevOps mindset and wants to improve the Lightning developer experience? We are hiring for a Platform Engineer!

Other roles include:

Lightning Infrastructure Engineer, Senior Engineering Manager, Cryptographic Protocol Engineer

Join us in making magic internet money a reality! 

**Want to get involved? Join the LND Developer Community on Slack.**

## Meams





Galoy  
@GaloyMoney

To the builders



3:55 PM · Dec 2, 2022

111 Likes 18 Retweets

Thanks for reading!

## Comments



Write a comment...

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[Substack](#) is the home for great writing